Quantifying Productivity Gains from Foreign Investment (by Fons-Rosen et al.)

Discussion

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First Thoughts

- important questions
- GREAT DATA!
- clever identification strategy
- ...sad evidence :-(
The Paper: Research Questions

- quantify the effect of FDI on aggregate TFP using micro-level data
- direct effect: does firm’s productivity reacts to changes in foreign-owned share?
  - problem: how to distinguish "cherry picking" (selection into FDI) from true effects?
- indirect effects: is productivity of domestic firms affected by foreign-owned firms?
  - spillovers due to competition
  - spillovers due to knowledge diffusion
  - vertical spillovers along the value chain
- aggregate all these effects at country level for many countries
Data

- firm-level data on accounting variables from ORBIS:
  - consider 134k manufacturing firms from 15 developed + 15 emerging economies, 1999-2008.
- foreign ownership ($FO$):
  - share of total assets owned by foreign investors (not a 0-1 variable)
- distinguish between:
  - financial owners $FO^F$ (banks, funds,...)
  - industrial owners $FO^I$ (firms)
- domestic firms have $FO = 0$ in all years
- estimate TFP at firm level with data on value added, raw materials, employment and capital
Identification Strategy

- 2 ways to take care of selection
- GLS estimation controlling for:
  - firm FE: more productive firms receive more FDI
  - country-time and sector-time FE: some sectors/countries are more appealing to foreign investors in certain periods
- IV - identifying assumption:
  - $F_{OF}^F$ only do cherry picking, $F_{OI}$ also affect management
  - instrument $F_{Oi}$ with $\hat{F}_{Oi} \ast W_{c,s,t}$
  - $\hat{F}_{Oi}$ = first observed value of $F_{Oi}$
  - $W_{c,s,t} = F_{OI} - \hat{b}F_{OF}^F$ (sectoral $F_{Oi}$ free of cherry picking)
Results

• GLS:
  ▶ TFP grows (little) in response to an increase in $FO$ both in developed and emerging economies

• IV estimates:
  ▶ in developed countries, TFP grows (more) in response to an increase in non-cherry-picking-led $FO$
  ▶ in emerging markets, TFP does not significantly react to an increase in non-cherry-picking-led $FO$
Spillovers

- Spillovers to domestic firms in the same 4-digit sector: competition
  - Result: negative effect in both developed and emerging countries
  - This is reflected by market shares increasing in $FO$ at firm level

- Spillovers to domestic firms in the same 2-digit but not 4-digit sector: knowledge
  - Result: positive effect in developed, negative in emerging countries

- Spillovers to domestic suppliers and/or customers
  - Result: positive effect on suppliers’ TFP, not on customers’
Comments and Questions: Identification

- \( \hat{FO}_i = FO_{i,0} \) may depend on expectations at time 0 about firm and sectoral productivity growth path, which may also affect future \( FO \):
  - what’s the role of expectation for the validity of your instrument?
- can we argue that the validity condition may be violated if complementarity between managerial skills and TFP makes industrial foreign owners better at cherry picking?
- financial investors may base their cherry-picking strategy on a shorter horizon than industrial investors:
  - which implications for your identifying assumption?
  - verify if \( FO^I \) is less volatile than \( FO^F \) at firm level, or if a drop in \( FO^I \) is less frequent than in \( FO^F \)
- firms with zero initial \( FO \) are always instrumented with a zero:
  - how much downward bias from this?
is the effect of changes in $FO$ symmetric?

- if the entry of foreign owners permanently changes the way production is organized, may have $FO \downarrow$ w/o $TFP \downarrow$, hence underestimate the positive correlation

the analysis abstracts from scale effects of FDI:

- if an increase in FDI raises total assets (scale), this translates in a less than proportional increase in $FO$, hence changes in $FO$ do not fully account for FDI
- if increased FDI raises the scale, the firm may find it profitable to invest in technology or productivity enhancing activities
- greenfield FDI has potentially no time variation and hence is not accounted for when controlling firm FE

other positive selection effects of FDI:

- multinationals are often multiproduct firms and may improve TFP by dropping their least profitable products: can you check this?
the conclusion is that financial integration, as captured by FDI inflows, has very little positive effects on aggregate productivity

- contrasting or complementing the papers that find positive macro-level correlation between broader measures of financial integration and TFP (e.g., Bonfiglioli, 2008 and Bekaert et al., 2011)?

it is great that we are now able to quantify the effect of foreign management, but...

- should we disregard the information contained in all the variation you eliminate?
- other, not well identifiable, effects get excluded from the quantification

shall we take home the sign more than the magnitude?